A taxonomic revision of the genus *Austrosteenisia* R.Geesink (Fabaceae: Millettieae).

D.J. Dixon

Summary

Dixon,D.J. (1997). A taxonomic revision of the genus *Austrosteenisia* R.Geesink (Fabaceae: Millettieae). *Austrobaileya* 5(1): 79–91. The genus *Austrosteenisia* R.Geesink is revised. Four species are recognized, namely *Austrosteenisia blackii* (F.Muell.) R.Geesink, *A.stipularis* (C.T.White) Jessup, *A.glabristyla* Jessup and *A. mollitricha*. Two varieties are recognized within *A. blackii* namely *A. blackii* (F.Muell.) R.Geesink var. *blackii* and *A. blackii* var. *astipella* D.J.Dixon. All taxa are described in detail and a key to their identity is provided.

Keywords: Fabaceae, *Millettieae, Austrosteenisia, Austrosteenisia blackii* var. *blackii, Austrosteenisia blackii* var. *astipella, Austrosteenisia glabristyla, Austrosteenisia mollitricha, Austrosteenisia stipularis.*

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Introduction

Austrosteenisia R.Geesink, a member of the tribe Millettieae in the family Fabaceae, was first described in 1984 although *A.blackii* (F.Muell.) R.Geesink (*Millettia blackii* F.Muell.) and *A. stipularis* (C.T.White) Jessup (*Lonchocarpus stipularis* C.T.White) were described much earlier. Mueller (1861) described *M. blackii* based on material collected from the Clarence River, Hastings River and Moreton Bay areas. Bentham (1864) transferred *M.blackii* to *Lonchocarpus* Kunth. A new taxon, *L. nesiotes*, was described by Bailey (1906) based on two specimens collected from the Bloomfield River and Percy Islands. The Bloomfield River specimen was subsequently selected as lectotype for Bailey's name which was transferred to *Derris* Lour. by Domin (1926). During a survey of the Australian species of *Derris, Tephrosia* Pers., and *Lonchocarpus*, White (1929) found the material used by Bailey as syntypes of his name consisted of fragments of *Derris trifoliata* var. *macrocarpa* Domin and *A. blackii*. White pointed out that the specimen chosen by Domin as lectotype of Bailey's name was also a mixed collection and that while the pods belonged to a species of Derris the leaves and flowers belonged to *Lonchocarpus blackii*. He thereby restricted the lectotype of Bailey's name to the pods in Poland's Bloomfield River specimen. White (1933) described *L. stipularis*. Polhill (1971) transferred the Australian species of *Lonchocarpus* to *Kunstleria* Prain, stating that only a slightly broadened generic concept was needed for their inclusion in this genus. Geesink (1984), in discussing his concept of *Kunstleria*, found that the Australian species differed from the Malesian and Philippine species, hence the circumscription of *Austrosteenisia* and the new combination, *A. blackii*, which was made at that time. Jessup (1986) made the second combination when transferring *Kunstleria stipularis* to *Austrosteenisia*, and at the same time described a new species, *A. glabristyla*.

Despite the studies of Geesink (1984), *Austrosteenisia* has never been critically revised in its entirety, and problems remain within the group. For example, Jessup (1986) considered that imperfect material present in the Queensland Herbarium represents further taxa in the genus. These specimens were not seen

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by Geesink. Therefore the research reported here aimed to critically review the genus and to assess the status of these specimens.

Materials and Methods

This study was based on herbarium specimens in BRI, LAE, MEL, NSW and QRS. Field observations of all species except *A. glabristyla* were made by the author.

Taxonomy

Geesink (1984) based his concept of *Austrosteenisia* on the known species *A. blackii* and *Kunstleria stipularis*. However, to account for the species described by Jessup (1986) and the new taxa identified here, Geesink's concept needs to be slightly modified. To account for the new taxa, the leaflet number, flower length, ovule number and number of seeds per pod have been amended in the generic description, (Table 1). Axillary panicles are also recorded in the genus for the first time. The following generic description is thus based partly on the description of *Austrosteenisia* sensu Geesink (1984) and partly on the results of this research. A key to the genera of the Millettieae has already been provided by Geesink (1984).

Austrosteenisia R.Geesink, Scala Millettiearum 78 (1984) **Type**: *A. blackii* (F.Muell.) R.Geesink

Lianas. Leaves compound, alternate; leaflets 5–17; stipellae present or absent. Inflorescence a terminal or axillary panicle. Bracts shorter than the corresponding flower buds; bracteoles present. Flowers 7.5–10.5 mm long; hypanthium indistinct. Calyx imbricate with 5 subequal lobes. Standard blade ± orbicular, strongly reflexed at base; basal callosities absent; wings with a normal claw and strongly reduced blade; keel petals falcate. Staminal tube straight; upper filament adnate to the other filaments. Basal fenestrae distinct. Disk distinct. Ovary hairy; ovules 9–20. Pod indehiscent, flat, membranous, without wings. Seeds 1–8, reniform, laterally flattened; radicle folded.

Table 1. The character states as accepted here in *Austrosteenisia*, compared with those given by Geesink (1984).

Character	Geesink (1984)	Dixon (1997)
Leaflet number	7–17	5–17
Flower length	c. 10mm long	7.5–10.5mm long
Ovule number	14–17	(7) 9–20
Seeds per pod	4–7	1–8
Panicle	terminal	terminal & axillary

Key to the species of *Austrosteenisia*

1. Leaflets 9–17; flowers either pink and white or mauve and white 2
   Leaflets 5–11; flowers maroon-red 3

2. Stipellae present; flowers mauve and white; style glabrous or nearly so; distribution south-eastern Queensland and north eastern New South Wales between latitudes 26°30'S and 30°20'S ..... **4. A. glabristyla**
   Stipellae absent; flowers pink and white; style bearded along upper margin ..... with golden hairs; distribution in rainforests of north-eastern Queensland between latitudes 15°50'S and 17°30'S ..... **1. A. stipularis**

3. Abaxial leaflet surface pilose; staminal tube with erect ± appressed hairs; distribution north of latitude 14°S along the east coast of Cape York Peninsula ..... **3. A. mollitricha**
   Abaxial leaflet surface glabrous or with erect or appressed antrorse hairs, rarely pilose; staminal tube glabrous rarely with hairs; distribution south of latitude 15°26'S extending along the Queensland and New South Wales coast to latitude 32°24'S ..... **2. A. blackii**

1. **Austrosteenisia stipularis** (C.T.White) Jessup, Austrobaileya 2(3): 243–245 (1986); *Lonchocarpus stipularis* C.T.White, Contr. Arnold Arb. Harvard Univ. 4: 45–46 (1933); *Kunstleria stipularis* (C.T.White) Polhill, Kew Bull. 25(2): 265 (1971). **Type**: Queensland. Cook District: Lake Barrine, Atherton Tableland, 8 November 1929, *S.F.Kajewski* 1348 (holo: BRI).

Robust liana. Stems covered with dense hyaline to rusty brown appressed hairs, glabrescent; lenticels elliptic, longitudinal. Leaves 5.5–27.0 cm long; stipules peltate, subrotund, 3.5–6.4 mm long, 2.3–4.5 mm wide, ciliate, caducous; stipellae absent. Leaflets 9–15, opposite, subopposite or occasionally alternate, imparipinnate, petiolules 0.6–7.0 mm long; laminae elliptic, oblong, or obovate, 0.9–7.2 cm long, 0.4–2.5 cm wide, increasing in size distally; base obtuse, cuneate, narrowly cuneate or attenuate; apex rounded, obtuse, acute, or acuminate with a small mucro; secondary veins 4–8 pairs with vein angle 32°–73°; adaxial leaflet surface with ± appressed antrorse or erect, hyaline to light brown hairs, glabrescent; abaxial surface pilose with erect hyaline to light brown hairs. Inflorescence a panicle to 38 cm long. Pedicels 0.5–3.6 mm long; calyx 4.3–5.8 mm long; petals pink and white; standard circular or widely to very widely ovate, 7.5–10.5 mm long including claw, c. 8.0 mm wide; wings 3.5–5.6 mm long; keel 7.0–9.6 mm long. Staminal tube glabrous. Ovary densely villous; ovules 6–14. Style bearded with golden hairs along upper margin. Pod elliptic to oblong, 4.7–9.0 cm long, 1.8–2.1 cm wide, with long and short golden brown appressed and erect hairs; stipe 4.5–10.0 mm long. Seeds 1–6. Fig. 1.

Selected examined specimens : **Queensland.** Cook District: 18 miles N of Mossman, Nov 1967, *Boyland & Gillieatt* 389 (BRI); Fairyland, Jan 1940, *Flecker* 6536 (QRS); 5 miles the Mareeba side of Kuranda, Oct 1976, *Gray* 203 (QRS); Forestry Reserve 1073, near Kuranda, Oct 1962, *Hyland* AFO/2793 (BRI); Lake Barrine, Nov 1971, *Hyland* 5637 (QRS); Egan Creek logging area, SW corner, Nov 1958, *Smith* 10486 (BRI); Canal Creek near Waugh's Pocket N of Innisfail, Oct 1973, *Webb & Tracey* 13653 (QRS); Lake Barrine, Atherton Tableland, Nov 1929, *White* 1348 (BRI); Kuranda, Nov 1985, *Williams* 85322 (BRI).

Etymology: The species epithet refers to the presence of stipules.

Distribution and habitat: *A. stipularis* is restricted to the 'Wet Tropics' rainforests of north-eastern Queensland between latitudes 15°50'S and 17°30'S, (Map 1). Personal

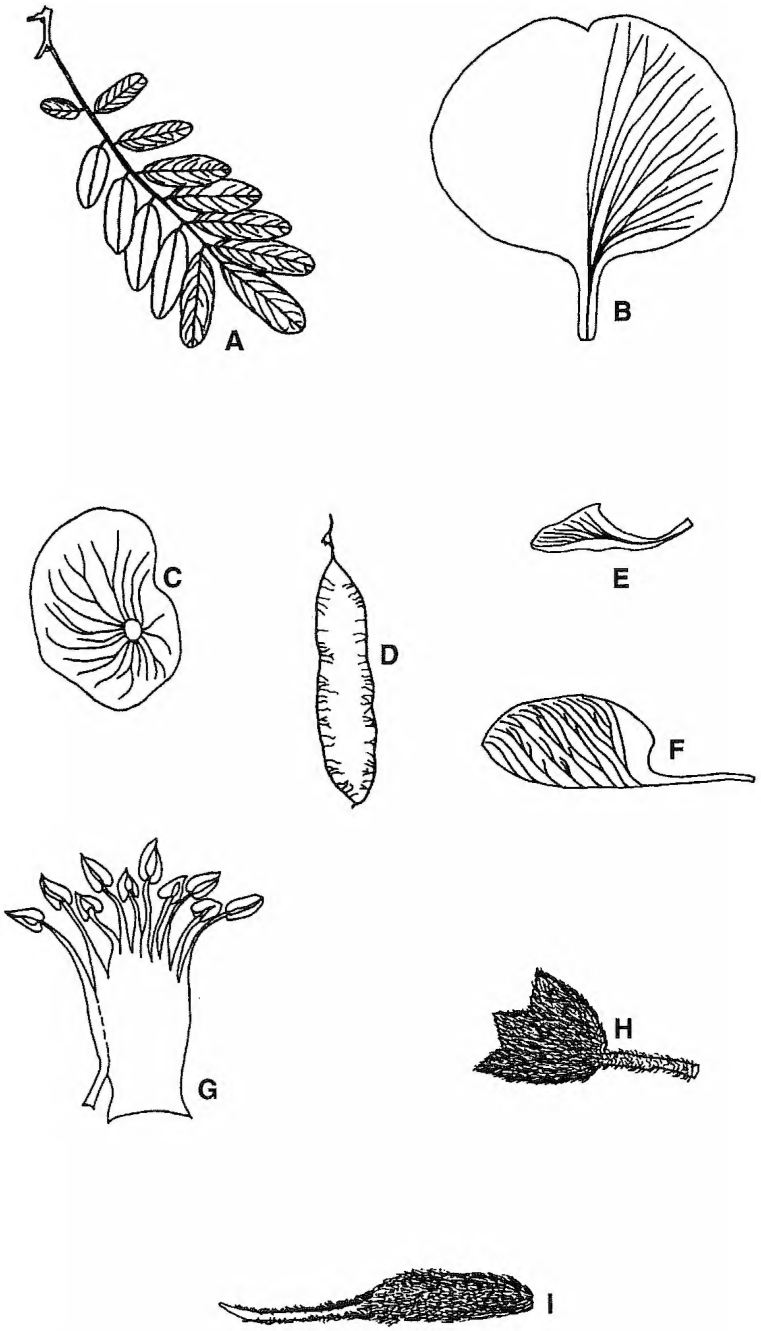
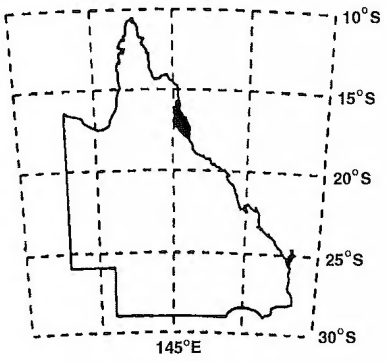


Fig. 1. *Austrosteenisia stipularis.* A. leaf × 0.4. B. standard × 4. C. stipule × 4. D. pod × 0.4. E. wing × 4. F. keel × 4. G. staminal tube × 4. H. calyx × 4. I. gynoecium × 4. A from Hyland 5637 (QRS); B–E, H & I from Dixon MB10/1994 (JCU); F from Flecker 6536 (QRS). Del. D.J.Dixon.

observations indicate that it is commonly encountered throughout its distributional range. Complex mesophyll vineforests are recorded as its preferred habitat (Hansen and Sankowsky, 1992). It has been found growing on a variety of soil types such as alluvial, basaltic, granitic and soils derived from metamorphic rock (Hansen and Sankowsky, 1992).

Phenology: *A. stipularis* is a deciduous species. Flowering occurs either before or with the new flush of leaves (Williams 1984). This species flowers between the months of September and November. Fruits have been recorded in January.



Map 1. Distribution of *Austrosteenisia stipularis*.

2. Austrosteenisia blackii (F.Muell.) R.Geesink, Scala Millettiearum (1984); *Millettia blackii* F.Muell., Fragmenta Phytographiae Australiae, 2:123 (1861); *Lonchocarpus blackii* (F.Muell.) Benth., Flora Australiensis, 2:271-272 (1864); *Kunstleria blackii* (F.Muell.) Polhill, Kew Bull. 25(2):259-273 (1971). **Type**: Moreton Bay, *W.Hill* (syn: n.v.); Hastings River, *H.Beckler* (syn: MEL); Clarence River, *H.Beckler* (syn: n.v.).

[*Lonchocarpus nesiotes* sensu F.M.Bailey, Queensland Agric. J., 17:162 (1906), pro parte, fide Polhill loc. cit.]

Woody liana. Stems covered with dense hyaline to rusty-brown erect to curved and appressed hairs, glabrescent; lenticels elliptic to rounded, longitudinal. Leaves 5.5–26 cm long; stipules peltate, lanceolate, ovate, 8.0–12 mm long, 3.5–5.0 mm wide, caducous; base rounded; apex acuminate; margin ciliate; stipellae present, 0.8–3.3 mm long, or absent. Leaflets 5–11, opposite or subopposite, imparipinnate; petiolules 1.6–6.7 mm long; laminae narrowly elliptic, elliptic to oblong, ovate or obovate, 1.4–11.8 cm long, 0.7–5.9 cm wide, increasing in size distally; base oblique, obtuse, truncate, or cuneate; apex acute, acuminate, or caudate with a small mucro; secondary veins 4–11 pairs with vein angle 38°–73°; adaxial leaflet surface glabrous or glabrescent; midvein with hyaline to rusty-brown, erect or curved hairs extending on to the laterals; abaxial surface with appressed antrorse, erect, hyaline hairs, glabrescent, very rarely pilose. Inflorescence a panicle to 34 cm long. Pedicels 1.0–4.5 mm long; calyx 4.0–7.0 mm long; petals maroon-red; standard circular, broadly to very broadly ovate, or depressed ovate to broadly depressed ovate, 7.5–10.5 mm long including claw, 5.2–9.5 mm wide; wings 3.5–6.0 mm long; keel 7.0–9.8 mm long. Staminal tube glabrous, rarely with hyaline hairs. Ovary densely villous with golden brown hairs; ovules mostly 10–20, very rarely as few as 7. Style bearded with golden brown hairs along upper margin. Pod elliptic to oblong, 3.8–9.6 cm long, 0.9–2.0 cm wide with appressed short and erect long hyaline and golden brown hairs; stipe 3.0–10.0 mm long. Seeds 1–8, reniform.

Etymology: This species was named after the most renowned Alan Black, custodian of Hooker's Herbarium and who first placed this species in the genus *Millettia* (Mueller 1861).

Two varieties are distinguished as follows.

1. Leaves with stipellae present ..... var. **blackii**
   Leaves with stipellae absent ..... var. **astipella**

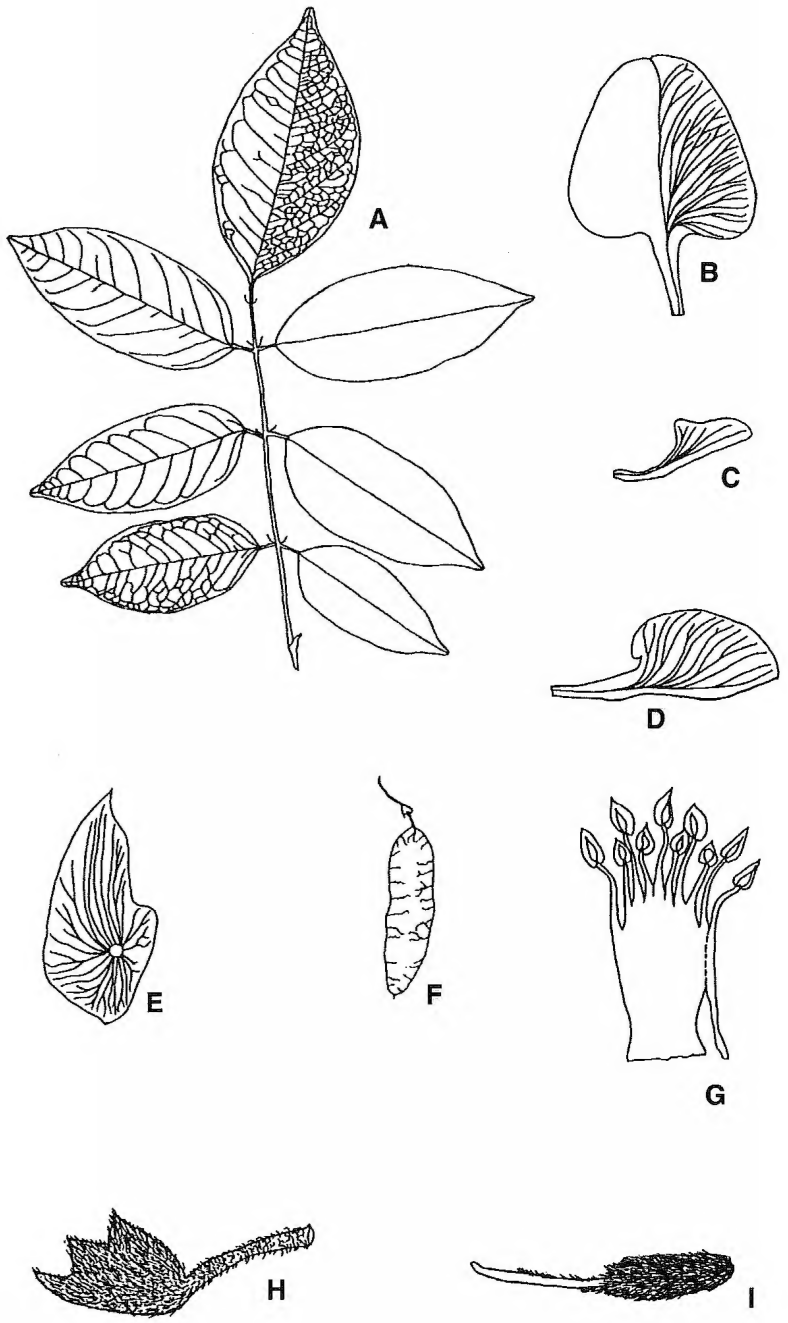


Fig. 2. *Austrosteenisia blackii* var. *blackii*. A. leaf. × 0.4. B. standard × 4. C. wing × 4. D. keel × 4. E. stipule × 4. F. pod × 0.4. G. staminal tube × 4. H. calyx × 4. I. gynoecium × 4. A from McDonald 4511 et al. (BRI); B–D, G–I from Dixon CA10/1994 (JCU); E from Forster PIF7676 (BRI); F from MEL 725121 (MEL). Del. D.J.Dixon.

Austrosteenisia blackii var. **blackii**

Distinguished by stipellae present on leaves. Fig. 2.

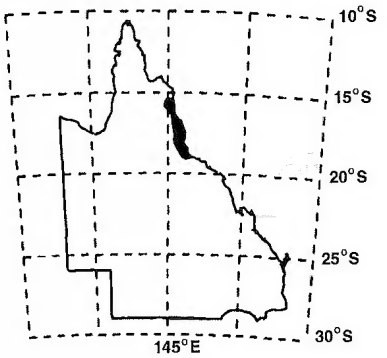
***Selected examined specimens*: Queensland.** Cook District: Prior Creek, Atherton, Dec 1938, *Flecker* s.n. (QRS); S.F.R. 185, Jan 1980, *Gray* 1617 (QRS); Tolga, Jan 1981, *Gray* 1878 (QRS). North Kennedy District: 5 km NW of Cardwell, on S bank of Meunga Creek, Oct 1976, *Everist* s.n. (BRI); Port Curtis District: West Bay, Middle Percy Island, Nov 1989, *Batianoff* 11823, *Champion, Thompson & Dillewaard* (BRI); near Carmilla, Oct 1937, *White* 12101 (BRI). Burnett District: Kalliwa S.F. 169, Dec 1990, *Forster* PIF7713 (BRI). Wide Bay District: Ocean Park Estate, Dundowran, Nov 1991, *Forster* PIF9182 (BRI). Moreton District: Petrie, N of Brisbane, Nov 1931, *Blake*, 2842 (BRI); Fig Tree Pocket, Brisbane, Jan 1978, *Pedley* 5005 (BRI); Mt. Crosby Road, Barnes Hill, Nov 1993, *Grimshaw* G94 (BRI). **New South Wales.** Lismore, *Fawcett* s.n. (MEL); Richmond River, *Fawcett* s.n. (MEL); Upper Hastings River, Nov 1897, *Maiden* s.n. (NSW); Ballina, Dec 1895, *Bauerlen* s.n. (NSW); Tooloom Range, Dec 1907, *Maiden* s.n. (NSW).

Austrosteenisia blackii var. **astipella** D.J.Dixon **var. nov.** ab *A. blackii* var. *blackii* differt stipellis absentibus. **Type:** Queensland. Cook District: S.F.R. 185 opposite fire tower, 17°09'S 145°31'E, 31 October 1978, *J.D. Fitzsimon* 296, (holo: QRS). Fig. 3.

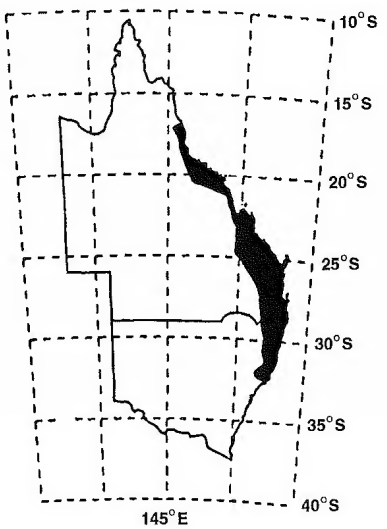
***Selected examined specimens*: Queensland.** Cook District: S.F.R. 185, Oct 1978, *Fitzsimon* 296 (QRS); Mazlin Creek, Atherton, Nov 1991, *Le Cussan* 11 (QRS); 7 km NNW of Lakeland Downs, Cape York, Sep 1987, Orr 197 (DNA); Clohesy River, Oct 1984, *Sankowsky* 354 & *Sankowsky* (BRI); Yungaburra, Nov 1985, *Sankowsky* 451 & *Sankowsky* (BRI). North Kennedy District: west of Kennedy, near Cardwell, Sep 1935, *Blake* 9721 (BRI).

***Etymology*:** The varietal epithet refers to the absence of stipellae.

***Distribution and habitat*:** *A. blackii* is distributed along the east coast of Australia from latitude 15°26'S to 32°24'S. *A. blackii* var. *astipella* occurs between latitudes 15°26'S and 19°S (Map 2), and is sympatric for part of its range with the type variety which occurs between latitudes 16°55'S and 32°24'S, (Map 3). Both varieties of *A. blackii* are strong vigorous conspicuous lianas common throughout their respective distributional ranges. *A. blackii* is considered well preserved (Forster et al., 1991). Rainforest classified as simple notophyll evergreen vineforest, complex mesophyll vineforest (Hansen and Sankowsky, 1992), semi-evergreen vine thickets, araucarian microphyll vineforest, and complex notophyll vineforest are the main habitats recorded for this species (Forster et al., 1991). It does however, extend out of the rainforest wherever ample moisture prevails, being quite common on creek and river banks of coastal Queensland (Williams, 1979). This species is commonly referred to as blood vine because of the red exudate that oozes from wounded tissue.



Map 2. Distribution of *Austrosteenisia blackii* var. *astipella*.



Map 3. Distribution of *Austrosteenisia blackii* var. *blackii*.

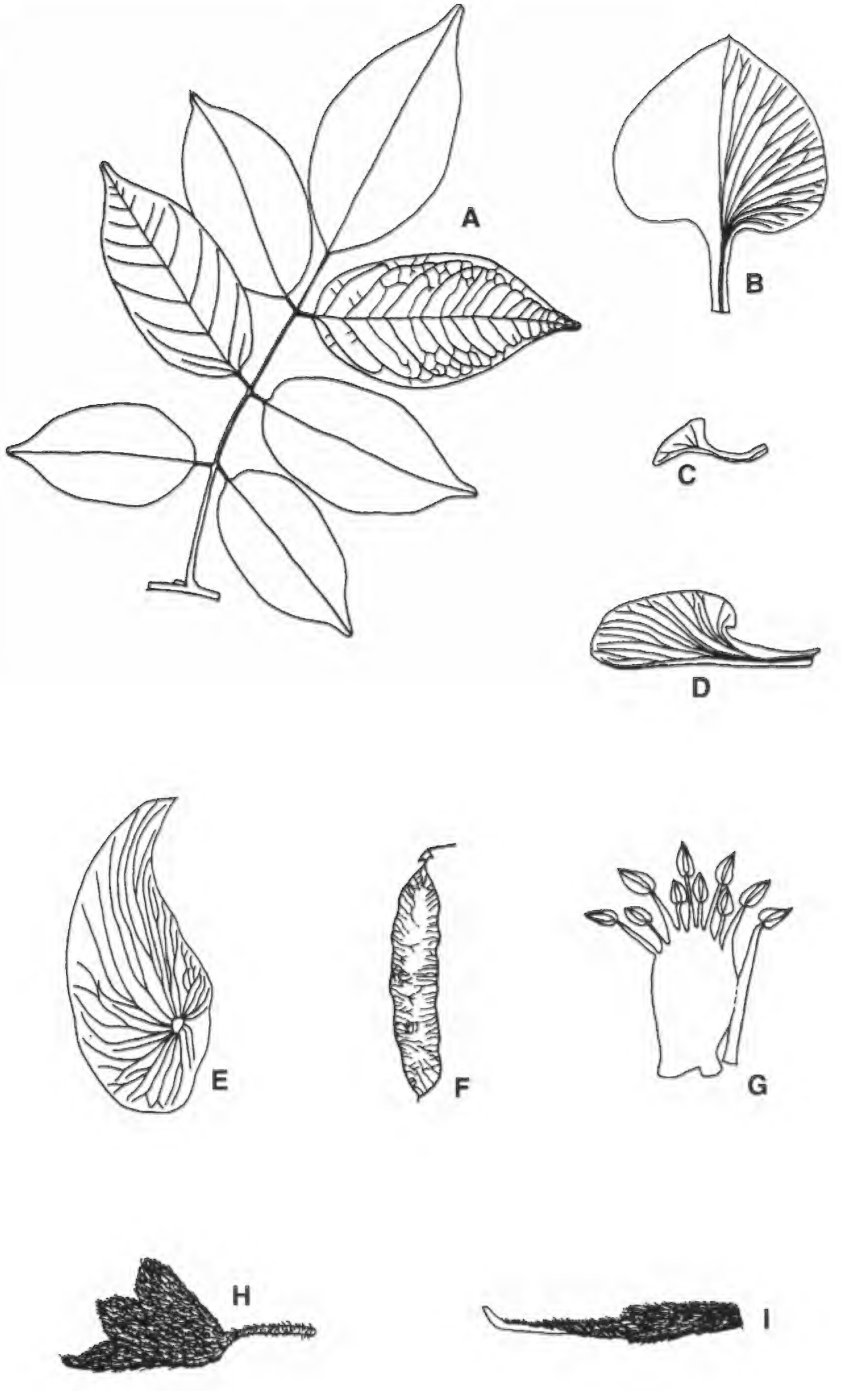


Fig. 3. *Austrosteenisia blackii* var. *astipella*. A. leaf × 0.4. B. standard × 4. C. wing × 4. D. keel × 4. E. stipule × 4. F. pod × 0.4. G. staminal tube × 4. H. calyx × 4. I. gynoecium × 4. A–D, G–I from Fitzsimon 296 (QRS); E from Poland 27 (BRI); F from Kemp (xxx). Del. D.J.Dixon.

Phenology: *A. blackii* flowers between September and December. Pods have been recorded from October to the following June.

Notes: *A. blackii* has also been recorded from Papua New Guinea (Queensland Herbarium, 1994) although I consider its recorded occurrence in PNG to be doubtful. The LAE specimen NGF48634 was annotated by a previous worker as of doubtful origin and locality. I agree with this annotation for a number of reasons. Firstly, *A. blackii* is a very conspicuous liana when in flower and in Australia is commonly encountered and collected. BRI, MEL, NSW and QRS hold substantial accessions compared to LAE which has only one. Secondly, *A. blackii,* in Australia, does not occur north of latitude 15°26'S, although there is suitable habitat north of this latitude. Thirdly, the new species *A. mollitricha*, also a commonly encountered liana which occurs north of latitude 14° S to the tip of Cape York Peninsula, has not been recorded from PNG. Therefore, the disjunct nature of the NGF48634 collection casts doubt on the occurrence of *A. blackii* in PNG. Only further field work will establish the authenticity of the PNG accession as actually coming from PNG.

3. Austrosteenisia mollitricha D.J.Dixon, **sp. nov.** affinis *A. blackii*, *A. stipulari* et *A. glabristyla;* ab *A. blackii* var. *astipella* et *A. stipulari* differt stipellis praesentibus; ab *A. blackii* differt tricomatibus pilosis in abaxiali pagina folioli praesentibus; ab *A. glabristyla* differt stylo barbato et numero foliolorum. **Type**: Queensland. Cook District: Lockerbie Scrub, 23 September1991, *G. Sankowsky* 1229 & *N. Sankowsky* (holo: BRI; iso: NSW, MEL).

Robust liana. Stems covered with dense hyaline to rusty brown hairs, glabrescent, glaucous, lenticels elliptic, longitudinal. Leaves 15.0–33.0 cm long; stipules, peltate, ovate, c. 14 mm long, c. 4 mm wide, ciliate, caducous; stipellae 1.3–3.5 mm long. Leaflets 5–9, mostly 7, opposite, imparipinnate; petiolules 2.1– 6.7 mm long; laminae elliptic, oblong, ovate, obovate, 3.6–14.3 cm long, 1.3–6.1 cm wide, increasing in size distally; base obtuse, rounded, oblique, cuneate, or narrowly cuneate; apex rounded, obtuse, acuminate, or caudate, with a small mucro; secondary veins 6–13 pairs with vein angle 36°– 65°; adaxial leaflet surface mainly glabrous; midvein with hyaline to rusty brown hairs, some extending to the secondary veins; abaxial surface pilose with erect hyaline to rusty brown hairs. Inflorescence a panicle to 33 cm long. Pedicels 2.2–5.0 mm long; calyx 4.4–6.5 mm long; petals maroon-red; standard widely ovate, 9.0–10.5 mm long including claw, to 6.0 mm wide; wings 3.6–6.2 mm long; keel 8.5–10.0 mm long. Staminal tube with hyaline erect, ± appressed hairs. Ovary densely villous; ovules 9–13. Style bearded with hyaline to light golden brown hairs along upper margin. Pod elliptic to oblong, 5.2–10.8 cm long, 1.5–2.1 cm wide, with long and short appressed and erect golden brown hairs; stipe 4.0–7.7 mm long. Seeds 1–7, reniform. Fig. 4.

Selected examined specimens: **Queensland**. Cook District: Wenlock River, Portland Roads road, Jul 1988, *Dalliston* CC125 (BRI); Pascoe River mouth, N bank, 33.8 km NNW of Lockhart River, Apr 1993, *Fell* DGF3138 & *Butcher* (BRI); escarpment of Great Dividing Range, 14.6 km NE of Heathlands Ranger Base, Oct 1993, *Fell* DGF3737 & *Stanton* (BRI); Lankelly Creek, Oct 1980, *Hyland* 10845 (QRS); Lockerbie Scrub, Sept 1991, *Sankowsky* 1229 & *Sankowsky* (BRI; NSW); Quintil Beach, N of road from Lockhart River, Nov 1977, *Tracey* 14319 (BRI); north bank of Pascoe River approx 1 km inland of river mouth, Nov 1977, *Tracey* 14387 (BRI); Lockerbie Homestead, Sep 1985, *Williams* 85189 (BRI); Goanna Creek E. of McIlwraith Range, Nov 1956, *Webb* 3159 (BRI); Bamaga, in 1962, *Webb* & *Tracey* 8019 (BRI); headwaters of Massey Creek, McIlwraith Range, Oct 1969, *Webb* & *Tracey* 9278 (BRI); Rocky River, McIlwraith Range, Oct 1969, *Webb* & *Tracey* 9368 (BRI); Rocky River on E. Foothills of McIlwraith Range, Oct 1969, *Webb* & *Tracey* 9423 (BRI); head of Peach Creek, McIlwraith Range, Oct 1969, *Webb* & *Tracey* 9868 (BRI).

Distribution and habitat: *A. mollitricha* occurs north of latitude 14°S along the east coast of Cape York Peninsula (Map 4). It is a commonly encountered canopy liana found growing in a range of forest types including semi-evergreen vineforest, semi-deciduous mesophyll vineforest, evergreen notophyll vineforest, and deciduous vine thickets. This species favours no particular soil type. It has been recorded on red lateritic soils, granitic alluvium, aeolian dune sand and sandstone.

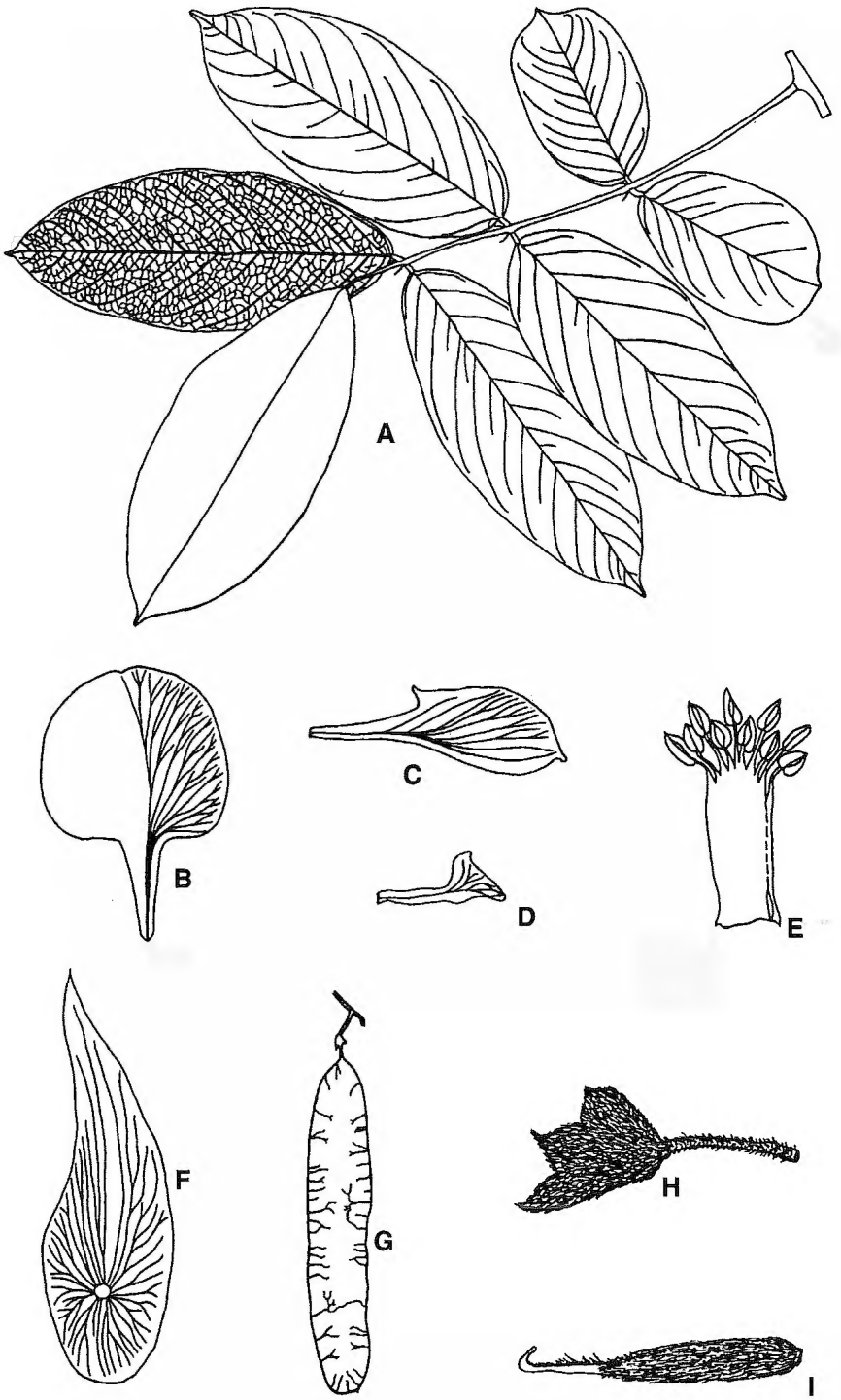
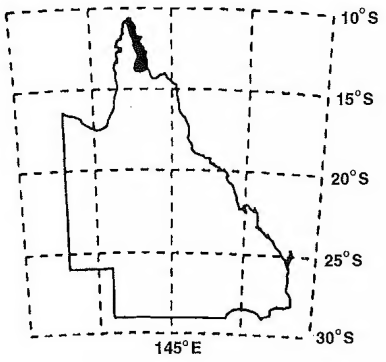


Fig. 4. Austrosteenisia mollitricha. A. leaf × 0.4. B. standard × 4. C. keel × 4. D. wing × 4. E staminal tube × 4, F. stipule × 4. G. pod × 4. H. calyx × 4. I. gynoecium × 4. A from Tracey 14319 (BRI); B–E, H & I from Sankowsky 1229 & Sankowsky (BRI), F from Webb & Tracey 9868 (BRI); G from Webb and Tracey 9368 (BRI). Del D.J. Dixon



Map 4. Distribution of *Austrosteenisia mollitricha.*

Phenology: *A. mollitricha* flowers from August to October with fruit sometimes persisting until the following flowering season.

Etymology: The species epithet is derived from the Latin *mollis* (soft or pliant) and *tricha* (hair), and refers to the soft hairs present on the abaxial surface of the leaflets.

Notes: *A.mollitricha* is closely related to *A. blackii.* It can be distinguished from this species by the pilose hairs on the abaxial surface of the leaflets and the presence of hairs on the staminal tube. *A. mollitricha* also possesses a unique distribution which does not overlap with that of any of the other species.

4. Austrosteenisia glabristyla Jessup, Austrobaileya 2(3): 243-245 (1986). **Type**: Queensland. MORETON DISTRICT: Picnic Rock Track, Lamington National Park, 10 January 1984, *L.W.Jessup* 581 & *A.E.Daly* (holo: BRI; iso: BRI; CANB, K, L, MEL, MO, NE, NSW fide Jessup op. cit.).

Woody liana. Stems densely villous with golden, rusty brown erect and ± appressed hairs, glabrescent; lenticels subrotund, longitudinal. Leaves 5.0–27.5 cm long; stipules peltate, ovate, 10.0–14.0 mm long, 6.0–8.0 mm wide, ciliate, caducous; stipellae 0.9–5.0 mm. Leaflets 9–17, opposite, subopposite, or occasionally alternate, imparipinnate; petiolules 1.3–3.8 mm long; laminae elliptic, oblong, obovate, lanceolate, or oblanceolate, 1.5–10.4 cm long, 0.4–2.9 cm wide, increasing in size distally; base obtuse, oblique, cuneate, or narrowly cuneate; apex acute or acuminate, with mucro; secondary veins 5–12 pairs with vein angle 33°– 65°; adaxial leaflet surface mostly glabrous; midvein with hyaline to rusty brown erect hairs; abaxial surface pilose with ± appressed antrorse hyaline to light brown hairs. Inflorescence a panicle to 33 cm long. Pedicels 1.1–2.1 mm long; calyx 3.0–5.5 mm long; petals mauve and white; standard broadly ovate, 9.2–10.5 mm long including claw, 8.3–8.5 mm wide; wings 4.5–5.0 mm long; keel 8.6–9.7 mm long. Staminal tube glabrous. Ovary densely villous; ovules 10–16. Style glabrescent. Pod elliptic to oblong, 32.0–61.0 mm long, 13.0–16.0 mm wide with long and short appressed and erect hairs; stipe 3.5–9.5 mm long. Seeds 1–4, oblong to reniform; testa brown. (Stipules not seen; measurements taken from Jessup 1986). Fig. 5.

Selected examined specimens: **Queensland.** MORETON DISTRICT: Picnic Rock Track, Jan 1984, *Jessup* 581 & *Daly* (BRI; NSW); Picnic Rock Track, Apr 1984, *Jessup* 584 (BRI); Currumbin Valley, May 1985, *Jones* 1807 (BRI); near Bijungoroo Cave, W of Canungra Creek, Lamington Plateau, Jan 1966, *Whaite* 3014 (NSW). **New South Wales.** Dorrigo, Jan 1935, *Fraser* s.n. (NSW); between Thora and Dorrigo, Jan 1960, *Salaso* 1905 (NSW); 3 km E of Mooball, beside Burringbar Creek, Nov 1977, *Williams* s.n. (BRI, NSW).

Etymology: The species epithet refers to the glabrous style.

Distribution and habitat: *A. glabristyla* occurs in coastal south-eastern Queensland and north-eastern New South Wales between latitudes 26°30'S and 30°20'S, (Map 5). In Queensland, it has been found growing in complex notophyll vineforest (Jessup 1986) and is considered adequately conserved (Forster et al.1991). In New South Wales, it has been recorded in both rainforest and open eucalypt woodland.

Phenology: *A. glabristyla* flowers between November and January. Fruits have been recorded from April to September.

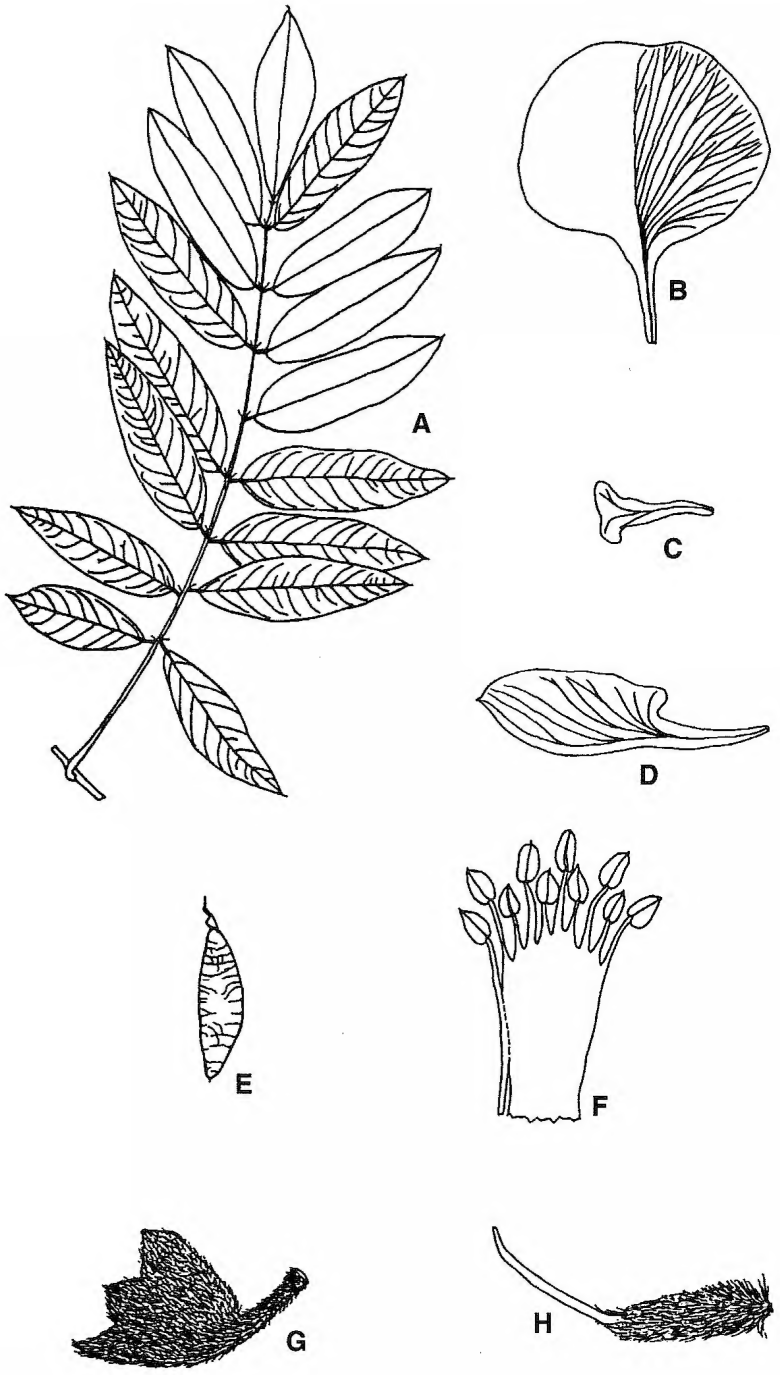
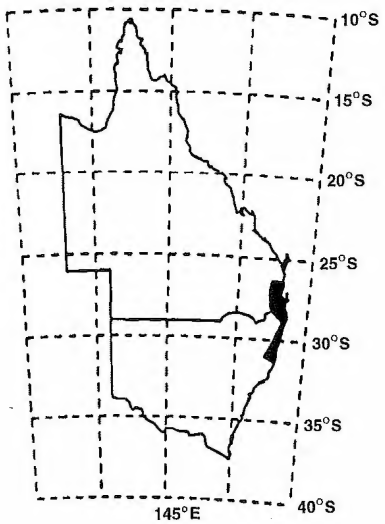


Fig. 5 *Austrosteenisia glabristyla.* A. leaf × 0.4. B. standard × 4. C. wing × 4. D. keel × 4. E. pod × 4. F. staminal tube × 4. G. calyx × 4. H. gynoecium × 4. A from Jessup 192 (BRI); B–D, F–I from Williams [AQ520574] (BRI); E from Jessup 584 (BRI). Del. D.J.Dixon



Map 5. Distribution of *Austrosteenisia glabristyla.*

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